

Notice of Allowability

Application No.

09/821,782

Applicant(s)

VERMA ET AL.

Examiner

Art Unit

Suryaprabha Chunduru

1637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/17/05.
2. ☒ The allowed claim(s) is/are 6,8-15,17-20,22,23 and 25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JEFFREY FREDMAN
PRIMARY EXAMINER

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DETAILED ACTION

1. Applicants' response to the office action and amendment filed on October 4, 2004 have been entered and considered. Claims 6, 8-16, 17-20, 22-23, and 25 are pending. Claims 1-5, 7, 21, 24, and 26 are canceled.
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Clifford J. Mass on October 28, 2005.

Claims 17-20, 22-23, and 25 are directed to an allowable product. Pursuant to the procedures set forth in the Official Gazette notice dated March 26, 1996 (1184 O.G. 86), claims 6, 8-15, directed to the process of making or using the patentable product, previously withdrawn from consideration as a result of a restriction requirement, Claims 6, 8-15 now subject to being rejoined. Claims 6, 8-15 hereby rejoined and fully examined for patentability under 37 CFR 1.104.

Since all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, the restriction requirement made in the Office action mailed on 9/30/2004 is hereby withdrawn.

Please amend the claims as follows:

Cancel claim 16.

Amend claims 6, 8-15, 17 as follows:

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The claims 6, 8-15, 17 should read as follows:

Claim 6. A method for the identification of an animal from a biological sample comprising DNA of the animal, said method comprising the steps of:

- a) isolating and amplifying the DNA with the primer pair as claimed in claim 17 to form amplified products;
- b) sequencing the amplified products to obtain a sequence of the amplified products;
- c) blasting the sequence obtained in step (b) against a database or databases and
- d) identifying the nucleotide sequence to which the DNA sequence of the biological sample bears maximum similarity to determine a source animal of the biological sample.

Claim 8. A method as claimed in claim 6 wherein the amplifying is carried out in 20 μ l reaction volume containing approximately 20 ng of template DNA, 100 μ M each of dNTPs, 1.25 pmole of each primer, 1.5mM $MgCl_2$, 0.5 units of AmpliTaq Gold (Perkin-Elmer-Cetus, USA) DNA polymerase and 1X PCR buffer (10mM Tris-HCl, pH 8.3, and 50mM KCl) and the amplifying comprises an initial denaturation at 95^o C for 45 s, annealing at 51^o C for 1 min, and extension at 72^o C for 2 min wherein the extension at 35th cycle is held for 10 min.

Claim 9. A method as claimed in claim 6 wherein the databases in step (c) are public databases.

Claim 10. A method for animal identification to solve a crime comprising analyzing a crime sample with the method of claim 6.

Claim 11. A method comprising establishing the identity of biological materials of an endangered species with the method of claim 6.

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Claim 12. A method for establishment of the identity of confiscated animal parts or products of endangered animal species comprising analyzing the confiscated animal parts or products of the endangered species with the method of claim 6.

Claim 13. A method comprising ascertaining the geographical location of the commitment of wildlife crime with the method of claim 6.

Claim 14. A method comprising detecting the adulteration of animal meat in food products with the method of claim 6.

Claim 15. A method for detection of the origin of blood or blood stains comprising subjecting a sample containing the blood or blood stains to the method of claim 6.

Claim 17. A universal primer pair for amplifying a fragment of cytochrome b gene of an animal species in a polymerase chain reaction (PCR) or determining the identity of the biological material of an animal of unknown origin at species and sub-species level, said primer pair consisting of SEQ ID No: 1 and SEQ ID NO: 2 and being capable of selectively amplifying a fragment of about 472 base pairs of a mitochondrial cytochrome b gene of any of at least 221 animal species, wherein the fragment being selectively amplified has a sequence that varies among each of the at least 221 animal species.

3. The following is an examiner's statement of reasons for allowance:

Claims 6, 8-15, 17-20, 22-23, and 25 are allowed.

The present invention is drawn to a universal primer pair consisting of SEQ ID NO: 1 and SEQ ID No: 2, said primer pair being capable of selectively amplifying a fragment of cytochrome b gene of an animal species in a polymerase chain reaction and the primer pair is used in a method for the identification of an animal from a biological sample and determining the

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identity of the biological material of an animal of unknown origin at species and sub-species level. The closest prior art teach amplification of mitochondrial cytochrome b gene and did not teach or suggest the universal primer pair consisting of SEQ ID NO: 1 and 2. and use of said primer pair in identifying the biological material of unknown origin at species and sub-species level. Thus the instant invention was not taught or obvious over the closest prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suryaprabha Chunduru whose telephone number is 571-272-0783. The examiner can normally be reached on 8.30A.M. - 4.30P.M, Mon - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and - for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.


Suryaprabha Chunduru
Patent Examiner
Art Unit 1637
November 1, 2005.


JEFFREY FREDMAN
PRIMARY EXAMINER

11/3/05